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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,870	04/16/2001	Mark Vange	CIRC012	5579

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EXAMINER	
LIN, WEN TAI	

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,870	VANGE ET AL.	
	Examiner	Art Unit	
	Wen-Tai Lin	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 2/22/2005.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☑ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. Claims 1-25 are presented for examination.

2. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 102

3. Claims 1-5, 8, 13, 20-22 and 25 are rejected under 35 U.S.C. 102(a)(e)(b) as being anticipated by SKENE et al.[U.S. PGPub 20010049741].

4. SKENE was cited in the previous office action.

5. As to claim 1, SKENE teaches the invention as claimed including: a system for serving web pages to a requesting software application [e.g., a browser] comprising [Abstract; paragraphs 45-50]:

a web site [e.g., 108, 120, 134-136, etc. of Figs.1-3E];

a plurality of front-end servers [e.g., 124, 128 and 142 of Fig.1; i.e., all the EDNS servers are front-end servers], wherein a unique network address is assigned to each front-end server

[paragraph 47; i.e., each EDNS server is assigned a unique Wide IP for communicating with the local DNS over the Internet];

a first channel configured to support request and response communication between the software application and the web site [e.g., the client (112) of Fig.1 communicates to any of the ISP and virtual end-point servers over the Internet and via intranets as necessary];

a plurality of second channels configured to support communication between each of the front-end servers and the web site [e.g., the client (112) of Fig.1 can communicate to any of the EDNS servers over the Internet]; and

a redirector server [i.e., the primary DSN 116 of Fig.1] operable to select one front-end server from the plurality of front-end servers and generate a response referring the requesting software application to the selected front-end server [paragraph 47].

6. As to claim 2, SKENE further teaches that the web site is located in a first address domain and the plurality of front-end servers are located within a second address domain [e.g., according to Fig.1, the network resources 108,134 and 136 are in different address domains from that of the front-end servers 124 and 142].

7. As to claim 3, SKENE teaches that the system further comprises mechanisms within the web site for redirecting a request received from the software application on the first channel to the redirector server [paragraph 46; e.g., if the local DSN of ISP (note that the ISP itself is a web site) is not able to resolve the domain name, it then redirect the request to the primary DNS server (e.g., 116 of Fig.1)].

8. As to claim 4, SKENE teaches that the system further comprising: mechanisms within at least some of the front-end servers for implementing a portion of the web site, wherein the redirector server [i.e, the primary DNS] amongst the plurality of front-end servers based upon a relative ability of the front-end servers to implement the web site without reference to the first address domain [paragraphs 7-12; note that Figs. 1-3E show variations of combing EDNS with DNS functionalities in one server].

9. As to claim 5, SKENE further teaches that the first communication channel comprises an Internet standard communication channel [102, Fig.1] and the second channel comprises an enhanced communication channel linking at least one front-end server with the web site [paragraphs 26-27 and 47; e.g., websites 134 and 136 of Fig.1 are linked to front-end server 128 via a local router and intranet, which is an enhanced network].

10. As to claim 8, SKENE further teaches that the redirector server comprises a multi-tiered set of redirector servers including:

a global redirector [104-105, Fig.3A; i.e., the Root DNS] which is registered with the public domain name system as a domain name server for the domain name of the web site [i.e., by default it must have been publically registered otherwise it would not be recognized by any local DNS];

a plurality of regional redirectors [e.g., 152, 154, Fig.3A] , wherein each regional redirector is registered with the global redirector as a domain name server for a particular

topographical region [paragraphs 46-48; note that primary DNS servers are located at different geographical locations]; and

a plurality of network redirectors [e.g., the secondary DNS and EDNS servers] wherein each network redirector is associated with a subset of front-ends [e.g., each secondary EDNS functions as domain name resolver (i.e., the front-end server as mentioned above)] and is registered with each of the regional redirectors as a domain name server for the associated subset of front-ends [paragraphs 31-34].

11. As to claim 13, SKENE further teaches that the redirector server generates a response referring the requesting software application to a secure port of the selected front-end server [e.g., a firewall (see paragraphs 26-27 and 37)].

12. As to claims 20-22 and 25, since the features of these claims can also be found in claims 1, they are rejected for the same reasons set forth in the rejection of claims 1 above.

Claim Rejections - 35 USC § 103

13. Claims 6-7, 9-12 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over SKENE et al.(hereafter "SKENE")[U.S. PGPub 20010049741], as applied to claims 1-5, 8, 13, 20-22 and 25 above, further in view of Official Notice .

14. As to claims 6-7, SKENE further teaches that the redirector server determines a quality factor for the plurality of second channels and selects at least one virtual server at least partially based upon the relative quality factors of the plurality of second channels or the relative quality factors of the channels between the front-ends and the requesting software application [i.e., path metric information; Fig.7; note that in Fig.2 the primary DNS includes a primary EDNS , therefore it is equivalent to say that the redirector also possesses the primary EDNS¡¦s functionality for collecting the various metric information described in paragraphs 74-76].

SKENE does not specifically teach that using the same quality criteria for the selection of the front-end servers (which function as domain name resolvers).

However, Official Notice is taken that using load balancing as selection criteria for choosing an optimal servicing server, including the DNS servers, is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the similar criteria to the selection of SKENE¡¦s front-end servers because load balancing the front-end servers would dramatically improve the overall system performance.

15. As to claims 9-10, SKENE does not specifically teach that the global redirector selects amongst the regional redirectors and network redirectors based upon an estimated user location indicated by the network address supplied by the requesting software application.

However, Official Notice is taken that using geographical proximity as a selection criterion for choosing an appropriate servicing server is well known in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for SKENE¡¦s global redirector to select the the regional redirectors and network

redirectors based upon an estimated user location indicated by the network address supplied by the requesting software application because SKENE¡¦s system is already designed to load balancing the resource servers and various metric information, including distance related metric, is readily available for using it as selection criteria [paragraphs 24 , 45-47; e.g., the round-trip time involves estimation of the distance between the user location and the EDNS location]. Note that same argument applies to the selection of network redirectors by their respective regional redirectors as described in claim 9.

16. As to claims 11-12 and 23-24, since the features of these claims can also be found in claims 1, 6, 8 and 20, they are rejected for the same reasons set forth in the rejection of claims 1, 6, 8 and 20 above.

17. Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over SKENE et al.(hereafter "SKENE")[U.S. PGPub 20010049741], as applied to claims 1-13 and 20-25 above.

18. As to claim 14, SKENE teaches the invention substantially as claimed including: a method for redirecting a communication between a software application and a network resource over a communication network as described in claim 1.

SKENE does not specifically teach selecting a second channel within the communication network that supports communication with the network resource; and responding to the DNS request with a network address of a front-end machine that supports the second channel.

However, SKENE teaches that a primary DNS first selects a EDNS server for resolving the domain name request, followed by selecting a virtual server for serving the network resource, wherein each EDNS server also locally connected to a subset of virtual servers. Since server selection based on location proximity via mirrored servers is well known to be effective in reducing network loading, it would have been obvious to one or ordinary skill that SKENE¡¦s primary DNS or EDNS servers could have applied a similar criterion by assigning virtual servers that are closer to the client¡¦s location because such slight modification would greatly improve the system¡¦s performance.

19. As to claims 15-19, since the features of these claims can also be found in claims 1-4, 8 and 13-14, they are rejected for the same reasons set forth in the rejection of claims 1-4, 8 and 13-14 above.

20. Applicant's arguments with respect to claims 1-25 on 2/22/2005 have been considered but are moot in view of the new mapping of the claimed features to those of SKENE.

21. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Conclusion

Examiner note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the contest of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(571)273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

April 22, 2005

Wen-Tai Lin
4/22/05